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20.  (New) The graphics display system of claim 18 wherein the read pointer is placed at a location of the first pixel to be displayed.

## REMARKS

Claims 1-20 are in the present application.  Claims 1, 7, 13, 14, 16 and 18 have been amended.  New claims 19 and 20 have been added. Applicants respectfully request reexamination, reconsideration and allowance of claims 1-18, and examination and allowance of claims 19 and 20.

Claims 1-18 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,515,077 to Tateyama ("Tateyama").  Regarding claim 1, the Examiner states that "Tateyama teaches the method of horizontally scrolling a display window to the left comprising the steps of blanking out four bit color data (10, 10) (See Fig. 24 D) in one horizontal display period (Fig. 24 A, col. 8, lines 3-24), image is scrolled by one dots to the left (horizontal scroll +1) (Fig. 24E, col. 8, lines 50-52), a picture is displayed on the screen in plurality color mode for each "nH" (n rasters) (see Fig. 28, col. 8, lines 25-26)."

Tateyama appears to disclose a method of smoothly scrolling an image horizontally.  (col. 9, lines 34-38).  However, "according to the invention [in Tateyama], timings for reading and transmitting data are controlled to perform a horizontal scroll."  (col. 9, lines 34-36).  In fact according to Tateyama, "The read-timing is shifted in order to realize a horizontal scroll.  The amount of the shift varies depending on whether the picture is scrolled by odd or even dots." In the present invention, on the other hand, the horizontal scrolling is achieved by blanking out one or more pixels at a beginning of a portion of graphics data by placing a read pointer at a location after said portion.  This way, the amount of shift for the read pointer varies depending on the number of pixels to be blanked out without

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regards to whether the even or odd number of pixels are to be blanked out.

Since the whole smooth horizontal scrolling scheme in Tateyama is based on controlling timing for reading and transmitting data, it necessarily results in a complicated system where the alignment between timing signals and data must be adjusted in order to effect horizontal scrolling. In the present invention, on the other hand, no such adjustment is needed for the alignment between timing signals and data since horizontal scrolling is effected simply by displaying the graphics data starting at the read pointer placed at a first non-blanked out pixel.

Claim 1 recites, in relevant portion, "blanking out one or more pixels at a beginning of a portion of graphics data by placing a read pointer at a location after said portion, the portion being aligned with a start address; and displaying the graphics data starting at the read pointer placed at a first non-blanked out pixel in the portion of the graphics data aligned with the start address."

Since Tateyama does not disclose "blanking out one or more pixels at a beginning of a portion of graphics data by placing a read pointer at a location after said portion, the portion being aligned with a start address; and displaying the graphics data starting at the read pointer placed at a first non-blanked out pixel in the portion of the graphics data aligned with the start address," applicants respectfully request that the rejection to claims 1 be withdrawn and that claim 1 be allowed.

Claims 2-6 depend, directly or indirectly, from claim 1, and therefore incorporate all the terms and limitations of claim 1 in addition to other limitations, which together patentably distinguish claims 2-6 over the cited references. Therefore, applicants respectfully request that the rejection to claims 2-6 be withdrawn and that they be allowed.

Regarding claim 7, the Examiner states that "Tateyama teaches the

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method of horizontally scrolling a display window to the right
comprising the steps of blanking out four bit color data (10, 10) (see
Fig. 25 D) in one horizontal display period (Fig. 25 A, col. 8, lines
3-24), image is scrolled by one dots to the right (horizontal scroll
-1) (Fig. 25E, col. 8, lines 50-52), a picture is displayed on the
screen in plurality color mode for each "nH" (n rasters) (see Fig. 28,
col. 8, lines 25-26)."

As discussed above in reference to claim 1, Tateyama discloses
a method of horizontal scrolling an image by controlling timings for
reading and transmitting data. (col. 9, lines 34-36).  On the
contrary, in the present invention, smooth horizontal scrolling is
effected by moving a read pointer to a new start address that is
immediately prior to a current start address and blanking out one or
more pixels at a beginning of a portion of graphics data by placing
the read pointer at a location after said portion.

Claim 7 recites, in relevant portion, "moving a read pointer to
a new start address that is immediately prior to a current start
address; blanking out one or more pixels at a beginning of a portion
of graphics data by placing the read pointer at a location after said
portion, the portion being aligned to the new start address; and
displaying the graphics data starting at the read pointer at a first
non-blanked out pixel in the portion of the graphics data aligned with
the new start address."

Since Tateyama does not disclose "moving a read pointer to a new
start address that is immediately prior to a current start address;
blanking out one or more pixels at a beginning of a portion of
graphics data by placing a read pointer at a location after said
portion, the portion being aligned to the new start address; and
displaying the graphics data starting at the read pointer at a first
non-blanked out pixel in the portion of the graphics data aligned with
the new start address," applicants respectfully request that the
rejection to claim 7 be withdrawn and that claim 7 be allowed.

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Claims 8-12 depend, directly or indirectly, from claim 7, and therefore incorporate all the terms and limitations of claim 7 in addition to other limitations, which together patentably distinguish claims 8-12 over the cited references. Therefore, applicants respectfully request that the rejection to claims 8-12 be withdrawn and that they be allowed.

Regarding claim 13, the Examiner states "Tateyama teaches the graphic display system which includes the a game-software recording medium CD-ROM 100 (raw graphic data), control unit 104 (a display engine) for mainly controlling transmission of image data (see Fig. 9, col. 4, lines 29-33), the control unit 104 has direct memory access (DMA) are supplied through an SCSI interface from CD-ROM 100. Data supplied to the SCSI controller are buffered in the K-RAM (see Fig. 30, col. 9, lines 53-57), blanking out four bit color data (10, 10) (see Fig. 24 D)."

The Examiner appears to equate the control unit 104 with the display engine in claim 13 of the present invention. However, Tateyama does not disclose that the control unit 104 is capable of selectively blanking out one or more pixels associated with the raw graphics data by selectively placing a read pointer.

Claim 13 recites, in relevant portion, "the display engine is capable of selectively blanking out one or more pixels associated with the raw graphics data by selectively placing a read pointer."

Since Tateyama does not disclose that "the display engine is capable of selectively blanking out one or more pixels associated with the raw graphics data by selectively placing a read pointer," applicants respectfully request that the rejection to claim 13 be withdrawn and that claim 13 be allowed.

Claims 14-20 depend, directly or indirectly, from claim 13, and therefore incorporate all the terms and limitations of claim 13 in addition to other limitations, which together patentably distinguish claims 14-20 over the cited references. Therefore, applicants

respectfully request that the rejection to claims 14-20 be withdrawn and that they be allowed.
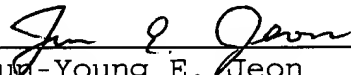
In view of the above amendments and remarks, applicants respectfully request a timely allowance of claims 1-20. If there are any remaining issues that can be addressed by telephone, applicants invite the Examiner to contact the applicants' attorney at the number indicated below.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made**."

Respectfully submitted,

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

1.    (Amended) A method of horizontally scrolling a display window to the left comprising the steps of:

blanking out one or more pixels at a beginning of a portion of graphics data <u>by placing a read pointer at a location after said portion</u>, the portion being aligned with a start address; and

displaying the graphics data starting at the <u>read pointer placed at a</u> first non-blanked out pixel in the portion of the graphics data aligned with the start address.

7.    (Amended) A method of horizontally scrolling a display window to the right comprising the steps of:

moving a read pointer to a new start address that is immediately prior to a current start address;

blanking out one or more pixels at a beginning of a portion of graphics data <u>by placing the read pointer at a location after said portion</u>, the portion being aligned to the new start address; and

displaying the graphics data starting at the <u>read pointer at a</u> first non-blanked out pixel in the portion of the graphics data aligned with the new start address.

13.    (Amended) A graphics display system comprising:

a display engine for receiving raw graphics data and converting the raw graphics data into graphics contents; and

a direct memory access module for transferring the raw graphics data from memory to the display engine,

wherein the display engine is capable of selectively blanking out one or more pixels associated with the raw graphics data <u>by selectively placing a read pointer</u>.

14.    (Amended) The graphics display system of claim 13 wherein the display engine comprises means for blanking out one or more pixels

associated with the raw graphics data <u>by selectively placing the read pointer</u>.

16.   (Amended) The graphics display system of claim 15 wherein the blanking out means blanks out one or more pixels from a portion of the raw graphics data <u>by selectively placing the read pointer</u>, wherein the portion is aligned with the start address.

18.   (Amended) The graphics display system of claim 17 wherein the blanking out means is used to blank out one or more pixels from a portion of the raw graphics data <u>by selectively placing the read pointer</u>, wherein the portion is aligned with the new start address.

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